COMPLIANCE WITH THIS INSTRUCTION IS MANDATORY

This instruction implements Air Force Policy Directive (AFPD) 21-1, *Maintenance of Military Materiel* and extends the guidance of Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management,* Air Force Reserve Command (AFRC) Supplement and AFI 11-2C-130V3, *C-130 Operations Procedures*. It provides guidance and procedures for maximum security and control of tools for personnel assigned to the Maintenance Group (MXG) and Operations Group (OG) functions of the 914th Airlift Wing (AW). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR), 914 MXG Quality Assurance at **UDG_914MXG_QA@us.af.mil**, using the AF Form 847, *Recommendation for Change of Publication*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS)**.**

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed in its entirety.

1. Overview. This instruction applies to all members assigned to the 914th Airlift Wing and any other personnel working on or around the aerospace equipment maintenance industrial area. All units that are dispatched to work on the flightline or aircraft maintenance areas will have a tool control program to account for tools/equipment and personal protective equipment.

2. Security, Control, and Accountability of Tools.

2.1. Composite Tool Kit (**CTK**) custodians, their alternate, supervisors or assigned personnel will conduct a shift inventory of all **CTKs** and equipment at the beginning and end of each shift. This is to verify that all **CTKs** and equipment are accounted for and must be documented either in the tool control program, **TCMax**, or on an **AFRC** Form 177, *Consolidated Tool Kit Inventory and Control Log;* if **TCMax** is inoperative. Work centers will create a separate event identification description/event identification designator (**EID**) number assigned to be used for the purpose of tracking the shift inventory. Individual tool boxes need not be opened for internal inventory unless they have been opened or used since last shift inventory; this includes "maxi" kits.

2.2. Tools and tool kits are required to be "signed out" anytime they are opened, used, or leave the **CTK** room/work center. This sign out will be documented in **TCMax**. If **TCMax** is not available, an **AFRC** Form 177 will be used on an interim basis. As part of the "sign out" procedure, the individual signing for kit will inventory the kit/equipment. **CTK** custodians, their alternate, Section Flight Chief, or assigned personnel will conduct a thorough inventory upon return prior to "signing in" kit or equipment. All Foreign Object Damage (**FOD**) will be removed before signing in a kit.

2.3. Aircraft technical order (**TO**) G-files will be added to the aircraft tool box CTK master inventory list (**MIL**).

2.4. All sections will create a master **MIL** file binder to be kept in that sections tool storage area. This binder will contain the following: A copy of each MIL for every separate **CTK** authorized by the flight chief/section Non-Commissioned Officer in Charge (**NCOIC**) (or equivalents) for that section, the **AFRC** 177 or **TCMax** equivalent containing the required annual inventory documentation, the spare tool inventory, the **AFRC** 177 or **TCMax** equivalent containing the required quarterly inventory, and a copy of the most current **CTK** Airlift Wing Instruction (**AWI**). Note: A separate copy of the **MIL** must be in every dispatchable **CTK**.

2.5. Laminated warning tags that are part of a **CTK** will be included on the MIL. Laminated warning tags that are not part of a **CTK** will be controlled at the discretion of the Section Flight Chief. Laminated warning tags that are part of the paperless ISO process will be controlled IAW 914th MXG Supplement 1 to **TO** 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies and Procedures*.

2.6. CTK/tool/equipment identification numbering will comply with **AFI** 21-101, Chapter 8, and will incorporate the world wide identification (**WWID**) U5-for the 914th **AW** and the two digit unit/work center identifier as per **EID** Listing. The fifth through the ninth characters are for individual work centers' numbering decisions.

2.7. When a broken tool is removed from a **CTK**, the vacant position will be covered with tape and identified as "broken". Individuals will notify the **CTK** custodian, their alternate or the Section Flight Chief to ensure the **AFRC** Form 175, *Broken/Missing/Removed Tools and Equipment,* **TCMax** and the **MIL** are documented to reflect the item has been removed.

2.8. Individually dispatchable tools and equipment must have a unique number which identifies the specific tool.

3. Inventory Requirements.

3.1. Annual tool/equipment inventories will be documented on an AFRC Form 177 or TCMax product equivalent and stored in the Master CTK/MIL binder. The annual inventory documentation format must state:

Annual Inventory C/W
By: J. Doe
Date: YYYYMMDD

3.2. Quarterly inventory of replacement and spare tools will be documented on an AFRC Form 177 or TCMax product equivalent and stored in the master CTK/MIL binder. The quarterly inventory documentation format must state:

Annual Inventory C/W
By: J. Doe
Date: YYYYMMDD

4. Warranted Tool Management. Only CTK custodians, their alternate, or Section Flight Chiefs will manage any warranted tool issues via direct contact with tool servicing agent/agency. Warranty tools will be identified as such in TCMax in order to segregate them if they become unserviceable.

5. Expendable/Consumable CTK Items.

5.1. Consumables (e.g., safety wire, string, solder, razor blades, batteries, APEX bits) will be stored in a limited accessible area and controlled by the CTK custodian, their alternate or Section Flight Chief. Consumables will be exchanged on a one for one basis, properly marked and placed back into the CTK as soon as possible upon depletion.

5.2. Hazardous Material (HAZMAT) assigned to a CTK will be marked as a consumable. Multi-use HAZMAT materials stored and issued from lockers within maintenance facilities will be identified with a WWID and issued in TCMax. HAZMAT items that are one time use items such as oil and hydraulic cans are bar-coded and tracked by the Pharmacy. These items need not be tracked in TCMax and will follow all HAZMAT and pharmacy procedures. These items will be returned to the Pharmacy/recycled as soon as practical after completion of task or when they are empty.

6. Job Site Transfer of Tools/CTK. Incoming and outgoing personnel will conduct a tool inventory together. Job site transfers will be documented by way of TCMax or AFRC Form 177.

7. Lost or Missing Tools.

7.1. Supervisors will ensure all assigned personnel are familiar with lost tool procedures in AFI 21-101, AFRC Supplement, Paragraph 8.9.2., if an item/tool or a portion of a broken tool is discovered missing.

7.1.1. If a lost or missing tool is not recovered after a thorough search of the aircraft a copy of the missing tool report will be filed in the aircrafts jacket file miscellaneous section.

7.2. If a tool or object is reported missing and the aircraft is preparing to taxi or has taxied, the following procedures apply:

7.2.1. If the aircraft has not taxied, the Maintenance Operations Center (**MOC**) will notify the expediter, who will notify the aircrew at the aircraft.

7.2.2. If the aircraft has taxied, but not yet airborne, **MOC** will notify the Command Post (**CP**) and request the aircraft is held pending the results of the investigation for the lost tool or object.

7.2.3. If a tool/item is discovered missing after the aircraft has taken off, the individual making the discovery will immediately notify their supervisor. The supervisor, in coordination with the production supervisor, will attempt to make a determination of the severity of the situation based on the last known location of the tool. The supervisor will immediately pass along all known information to **MOC** and Quality Assurance (**QA**). **MOC** will immediately pass all pertinent information to the **CP** and in-turn the Aircraft Commander (**AC**). If there is any potential for the item to cause safety of flight concerns, the **MOC** will relay the information to the **CP** and request that the aircraft land immediately if it is in the local area. If the aircraft is out of the immediate area the AC will make the determination where to land and what procedures to follow.

Table 1. Event Identification Description/Event Identification Designator (EID).

3rd Digit M = (MXS/MXM Shops) O = (AMXS Shops)	**914TH Airlift Wing**								
	DIGIT 1	DIGIT 2	DIGIT 3	DIGIT 4	DIGIT 5	DIGIT 6	DIGIT 7	DIGIT 8	DIGIT 9
	Unit Identifier		*Sqd Shop Code*	*Shop Code*	*Individual Shop Numbering Decision*				
Comm/Nav	U	5	M	C					
GICO	U	5	M	G					
Electronic Warfare	U	5	M	W					
Munitions	U	5	M	U					
AGE	U	5	M	R					
Propulsion	U	5	M	P					
Metals	U	5	M	M					
Structural	U	5	M	T					
NDI	U	5	M	N					
ISO/Refurb	U	5	M	S					
Aero Repair	U	5	M	A					
Hydraulics	U	5	M	H					
Fuels	U	5	M	F					
Electro Environmental	U	5	M	E					
Sortie Support Equip	U	5	M	Q					
Quality Assurance	U	5	M	Y					
CTK Tool Crib	U	5	M	K					
Flightline	U	5	O	1					

8. Personal Protective Equipment (PPE) Control. All issued **PPE** must comply with individuals' sections **BE** survey. Issued personal equipment such as ear defenders, communication headsets, reflective belts, etc., will be marked with **EID** and controlled through normal **CTK** procedures. **PPE** will not be long term issued at home station unless personnel are deploying/temporary duty (TDY) or assigned to an Administrative office within **MXG** that is not

associated directly with a maintenance work center. These administrative offices will have their PPE loaded into a work centers **TCMAX** within their squadron and long term issued.

9. Rag Control.

9.1. Rag control applies to organizations performing on/off equipment aircraft maintenance. Supervisors are responsible for ensuring rags are controlled.

9.2. All rags will have positive control upon receipt from supply or the contract vendor. Primary drop off/distribution point account custodians will manage and document assets on a one for one basis using a Rag Control Account Record (**Attachment 2**). Rags and reusable absorbent system (RAS) pads will be stored and separated by clean and dirty lockable containers. Account custodians will ratify, sign for and forward all invoices to Government Purchase Card (**GPC**) card holder for accountability. GPC card holder will coordinate with Contracting for payment utilizing Wide Area Work Flow (**WAWF**) system or approved payment method.

9.3. Work center distribution points may be established to distribute rags and RAS pads for remote or standalone work centers. The section supervisor or designated representative will obtain or exchange rags and RAS pads from drop off/distribution points utilizing the rag control account record.

9.4. Work centers will use the following procedures for rag and **RAS** pad control and accountability. Rags and **RAS** pads will be issued and controlled utilizing **TCMax**, **IAW AFI** 21-101, **AFRC** Supplement, Chapter 8. Rags may be issued in prepackaged containers, as part of an existing **CTK** or individually issued. The number of rags in prepackaged containers will be determined by the work center supervisor. If used, prepackaged containers will be marked with the number of rags and the **WWID**.

9.5. Lost rags will be treated the same as a lost tool and personnel will follow the Lost or Missing Tool Procedures outlined in this instruction.

10. Procurement of Tools.

10.1. Only **CTK** Custodians, their alternate, or Section Flight Chiefs will procure tools and replacement items for **CTKs**. Tools may be purchased with **GPC** or through normal base supply system.

10.2. Work centers are authorized to maintain a stock of spare tools which will be loaded in **TCMax**. Spare tools must be stored in a secure location separate from **CTK** and inventoried quarterly.

11. Locally Manufactured Tools/Equipment. Locally manufactured tools and equipment will comply with procedures outlined in the local Maintenance Group Supplement to **AFI** 21-101. Items produced under the Locally Manufactured Tool/Equipment Program will be controlled through normal **CTK** procedures. If local manufactured tool/equipment is dispatchable it must be accounted for in **TCMAX**.

12. Field Service Representative (FSR), Depot Field Team (DFT), and Contract Field Team (CFT) Procedures.

12.1. **FSRs**, **DFTs**, **CFTs**, and wash contractors, when assigned to perform aircraft maintenance, must be able to show full accountability of tools per the applicable portion of the contract or will comply with this instruction.

12.2. A **QA** office representative will review and approve **FSR/DFT/CFT** and wash contractor tool control procedures and ensure compliance with **CTK** guidance.

12.3. Any lost tool from a **FSR/DFT/CFT** or wash contractor will follow the Lost or Missing Tool Procedures outlined in this instruction.

13. Decentralized CTKs, Tools and Equipment. Decentralized **CTKs** are those which are owned by one work center and stored at another for ease of production (e.g. **ISO**) and will utilize the **AFRC** Form 177 located within **the CTK** to document daily/shift inventories whenever the **CTK** is opened. Individuals will annotate the initial "sign out" inventory on the AFRC Form 177. It is also the individual's responsibility to ensure another individual accomplishes the "sign in" inventory on the AFRC Form 177 prior to locking the **CTK** and returning the key to the appropriate tool room.

14. Permanently Stored/Located Equipment. Permanently stored/located equipment (e.g., Crash Damaged or Disabled Aircraft Recovery (**CDDAR**)) will require positive control in the form of physical inventories at the start and stop of a procedure or at a minimum, daily when in use. **TCMax** inventories along with **AFRC** 177s will be kept with **CDDAR** equipment and used during event. **CDDAR** hand-tools that fall under **CTK** program guidelines will be marked and loaded in **TCMax**. Operating stock/materials need a master listing or other type of positive control.

15. Single Person Shift. In a single person shift or work center the **CTK** will be inventoried and signed in by an individual from a different work center.

16. Access to Tool Rooms. CTKs and equipment in tool rooms and work centers will be secured anytime not attended by authorized personnel. Work centers that do not have a tool room will provide security measures that restrict access to tools and prevent tools from being removed without authorization.

17. Electronic Devices. Electronic devices (e.g., laptops/e-Readers) used for aircraft/aerospace equipment maintenance or which enter the flightline or aerospace equipment maintenance industrial areas will follow **CTK** guidance outlined in **AFI** 21-101, **AFRC** Supplement, Chapter 8 and this local instruction.

18. FOD Container/Pouches. FOD containers/pouches may be attached to dispatchable **CTKs** to collect **FOD**. If attached contents of the **FOD** containers/pouches will be properly disposed of prior to turning in the **CTK** to the **CTK** Room.

19. 914 Operations Group (OG) Responsibilities.

19.1. All Aircrew members will inventory all equipment and personal items prior to flight and account for them after flight. Any lost item will be documented in the aircrafts **AFTO IMT** Form 781A, *Maintenance Discrepancy and Work Document.*

19.2. Flight Engineer tool kits have been issued to all engineers **IAW AFI** 11-2C-130V3, *C-130 Operations Procedures,* Paragraph 6.2.10. They contain all the tools required to perform the emergency actions in Section 3 of the flight manual and hostile environment repair procedures (when combined with the contents of the Hostile Environment Repair Tool Kit).

19.3. The kits and contents are numbered for accountability and will contain a unique seal number created by the Operations Squadron. A control log is maintained by the Chief Flight Engineer. Engineers will inventory the tool kit anytime it is opened/used. The kits will also be inspected by the flight engineer during pre-flight and the seal number will be verified. The seal number will be annotated on the **AFTO** Form 781A, note page.

19.4. Loadmaster personnel are responsible for drop kits used for rigging of actual airdrop loads that are located in Aerial Port. The kits and contents are numbered for accountability. They will be signed out to the Loadmaster prior to missions requiring their use (air drop). Drop kits will be inventoried prior to aircraft pre-flight, and re-inventoried prior to engine start. Any tool missing during initial inventory will be annotated and reported missing. Any tools missing after initial inventory and prior to engine start will be identified and reported to the Operations Duty Officer prior to engine start.

20. 914th Operations Group Aircrew Flight Equipment (AFE) Procedures. All **AFE** personnel are responsible for compliance with this section.

20.1. In order to accomplish mission requirements and the prevention of **FOD**, it is essential that a tool control program be established within the **AFE** Section. Tools assigned to each section within the branch will be closely monitored by the section supervisor to prevent pilferage and **FOD**. The overall section tool program will be closely monitored by the **CTK** monitor and **NCOIC**.

20.2. All toolboxes will be shadow boxed to provide a specific place for each tool. All tools will be engraved to identify the section to which it belongs. To maintain standardization within the section, the following identification numbers will be engraved on the outside top or front of each tool:

20.2.1. **ALS**-1: To identify the Helmet/Mask Section Tool Box.

20.2.2. **ALS**-2: To identify the Survival Kit Section Tool Box.

20.2.3. **ALS**-3: To identify the Mobility Section Tool Cabinet.

20.2.4. **ALS**-4: To identify the Flight-Line Section Tool Kit.

20.3. The Section **CTKs** will be used for that area for shop equipment maintenance only. Each tool will be etched and stored in a designated tool bin.

20.4. Tools will be inventoried at the beginning and end of each shift. A **CTK** Inventory and Control Log will be located in the **CTK**.

20.5. Each individual is responsible for control over tools used within their section. All tools will be placed in the **CTK** when not in use. Tools will not be taken out of their section.

20.6. Aircrew flight equipment personnel dispatched to the flightline will provide their units flightline **CTK** to correct any aircraft discrepancies.

20.7. If tools are lost, stolen or damaged, notify your **CTK** monitor and NCOIC.

20.8. If tools are discovered missing after an aircraft has taxied; the following procedures will be used.

20.8.1. The individual discovering the lost/missing tool will contact the **MOC** who will in turn notify the Command Post. The Command Post will immediately notify the

Operations Duty Officer and unit operation. If aircraft is airborne, the Operations Duty Officer will take control of all actions.

20.8.2. Consumables will be controlled in zip lock bags.

BRIAN S. BOWMAN, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 11-2C-130V3, *C-130 Operations Procedures*, 23 April 2012

AFI 21-101, *Aircraft and Equipment Maintenance Management,* 21 May 2015

AFMAN 33-363, *Management of Records*, 1 March 2008

AFPD 21-1, *Maintenance of Military Materiel*, 29 October 2015

TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies and Procedures,* 1 April 2016

Adopted Forms

AF 847, *Recommendation for Change of Publication*

AFRC 175, *Broken/Missing/Removed Tools and Equipment*

AFRC 177, *Consolidated Tool Kit Inventory and Control Log*

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

Abbreviations and Acronyms

AC—Aircraft Commander

AFE—Aircrew Flight Equipment

AFI—Air Force Instruction

AFPD—Air Force Policy Directive

AFMAN—Air Force Manual

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

AW—Airlift Wing

AWI—Airlift Wing Instruction

CDDAR—Crash Damaged or Disabled Aircraft Recovery

CFT—Contract Field Team

CTK—Composite Tool Kit

CP—Command Post

DFT—Depot Field Team

EID—Equipment Identification Description/Equipment Identification Designator

FOD—Foreign Object Damage

FSR—Field Service Representative

GPC—Government Purchase Card

HAZMAT—Hazardous Material

IAW—In Accordance With

MIL—Master Inventory List

MOC—Maintenance Operations Center

MXG—Maintenance Group

NCOIC—Non-Commissioned Officer in Charge

OG—Operations Group

OPR—Office of Primary Responsibility

PPE—Personal Protective Equipment

QA—Quality Assurance

RAS—Reusable Absorbent System

RDS—Records Disposition Schedule

TCMax—AFRC Tool Accountability System

TDY—Temporary Duty

TO—Technical Order

WAWF—Wide Area Work Flow

WWID—World Wide Identification

Attachment 2

RAG CONTROL ACCOUNT RECORD

RAG CONTROL ACCOUNT RECORD

Employee Number	Date	Rags Issued	Dirty rags turned in	Clean rags balance Initial Qty: ___	RAS pads received	Dirty RAS pads turned in	Clean RAS pad balance Initial Qty ___